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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/696,390	10/25/2000	Michael D. Stokes	205718	4121

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EXAMINER
CASCHERA, ANTONIO A

ART UNIT	PAPER NUMBER
2697	

DATE MAILED: 02/13/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____ .

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-33* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12 and 14-33* is/are rejected.

7)☒ Claim(s) *13* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *10/25/2000* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

    If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

       1.☐ Certified copies of the priority documents have been received.

       2.☐ Certified copies of the priority documents have been received in Application No. _____ .

       3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

14)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

    a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .

4)☐ Interview Summary (PTO-413) Paper No(s). _____ .

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____ .

DETAILED ACTION

Specification

1.   The disclosure is objected to because of the following informalities:

a.   The word, "makes," in the phrase, "...to provide a way to makes it..." should be replaced with, "make," (see page 2, line 17).

b.   The phrase, "...digital camera 72, a scanner 74..." should be changed to, "...digital camera 74, a scanner 72..." (see page 10, line 5 and #72, 74 of Figure 2). Appropriate correction is required.

Drawings

2.   The drawings are objected to because the description, "Transimit captured color image data to driver," for reference #148 of Figure 4 should read, "Transmit captured color image data to driver." A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Objections

3.   Claim 1 is objected to because of the following informalities:

a.   The term, "callable" in line 5 of claim 1 should be replaced with, "capable." Appropriate correction is required.

4. Claim 14 is objected to because of the following informalities:

    a. The phrase, "...having computer executable instructions for performs steps for..."

    should be replaced with, "...having computer executable instructions for performing

    steps for..." (see lines 1-2 of claim 14).

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 2, 11, 14, 15, 23-25, 28-30, and 33 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Yokomizo (U.S. Patent 5,923,824) in view of Sakuyama et al. (U.S. Patent

6,137,595).

In reference to claims 1, 14, 24, and 29 Yokomizo discloses a color processing method

for use by a device driver installed in a computer memory (see column 2, lines 60-61), executed

by an application running on the OS of the computer system (see column 4, lines 5-7) and

controlling an image-capturing device (see column 3, lines 5-12). Yokomizo also discloses the

device driver controlling a scanner to perform image-capturing operations (see column 3, lines

22-26, column 4, lines 23-24 and #1-3 of Figure 1) and receiving color image data from the

scanner (see column 3, lines 37-39 and 43-45). Yokomizo discloses the device driver setting

operation parameters for image-capturing devices by using a Virtual Color Space Conversion

Protocol (see column 5, lines 61-67 and Figure 3). Yokomizo also discloses the operation

parameters to include a color management requirement (see column 6, lines 23-26 and #44' of

Figure 4). Yokomizo discloses a command in the menu of an application in software to operate

the scanner via the device driver (see column 4, lines 6-8) which provides an interface to the

computer system (see column 3, lines 13-21). Yokomizo also discloses receiving color image

data from the image-capturing device (scanner) (see column 5, lines 15-28 and #11 of Figure 2).

Yokomizo does not explicitly disclose a color management component having color

management functions capable for performing color management operations however, Sakuyama

et al. does. Sakuyama et al. discloses a color conversion engine capable of performing color

management operations (see column 5, lines 45-51). Note that Sakuyama et al. does not

explicitly disclose the utilization of the color conversion engine with an image-capture device

however he does disclose utilizing output devices and their corresponding color profiles (printer

and monitor) (see column 5, lines 43-51) thus it would have been obvious to one of ordinary skill

in the art at the time the invention was made to adapt such a color conversion engine to accept

image-capture device profiles in order to utilize the color matching techniques of the color

conversion engine for receiving color image data. Sakuyama et al. discloses calling a color

management function of the color management component to operate on the color image data

when color management is required (see column 5, lines 35-42). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to incorporate the device driver

and image-capturing techniques of Yokomizo with the color management component of

Sakuyama et al. in order to provide a color matching system to,"…obtain the same color image

from different devices," (see column 1, lines 25-27 of Sakuyama et al.).

In reference to claims 2, 15, 25, and 30, Yokomizo and Sakuyama et al. teach all of the claim limitations as applied to claims 1, 14, 24, and 29, respectively, in addition Sakuyama et al. discloses the color conversion engine to be provided in the operating system (see column 5, lines 43-44).

In reference to claims 11, 23, 28, and 33, Yokomizo and Sakuyama et al. teach all of the claim limitations as applied to claims 1, 14, 24, and 29, respectively, in addition Yokomizo discloses a scanner device driver forwarding color image data received from the scanner to an image-processing application (see #1, #2, #3, #5, and #9 of Figure 1 and lines 2-4 of abstract). Yokomizo also discloses the Virtual Color Space Conversion Protocol where two devices communicate and decide whether either device data requires a conversion (see column 6, lines 18-32 of Yokomizo). Neither Yokomizo nor Sakuyama et al. teach the device driver deciphering such a color management protocol however it would have been obvious to one of ordinary skill in the art at the time the invention was made to implement the such a protocol between the device driver and computer system in order to save processing resources by deciding, before hand, whether color conversion was needed.

6.   Claims 3-8, 10, 16-22, 26, 27, 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yokomizo (U.S. Patent 5,923,824), Sakuyama et al. (U.S. Patent 6,137,595) and further in view of Tretter (U.S. Patent 6,463,173 B1).

In reference to claims 3, 16, 26, and 31, Yokomizo and Sakuyama et al. teach all of the claim limitations as applied to claims 1, 15, 24, and 29 respectively, however they do not teach a device driver calling the color management function. Tretter discloses a device driver for an output device consisting of a contrast enhancer which converts RGB data to luminance data and

then back again (see columns 6-7, lines 65-3, column 12, lines 57-62 and #109,501 and 521 of

Figure 5). Note even though Tretter discloses such a conversion system adapted for a printer

driver, it would have been obvious to one of ordinary skill in the art at the time the invention was

made to configure such a conversion system with the combined image-capturing device driver of

Yokomizo and Sakuyama et al. in order to create an improved captured image by, "...remapping

pixel values to take advantage of the full range of possible <pixel value> outputs," (see column

1, lines 45-48 of Tretter).

In reference to claims 4 and 17, Yokomizo, Sakuyama et al. and Tretter teach all of the

claim limitations as applied to claims 3 and 16, respectively, in addition, Yokomizo discloses

performing gamma correction in order to display an RGB signal so that it is, "proper" to the

human eye (see column 12, lines 26-28 and Figure 13). Note that it would have been obvious to

one of ordinary skill in the art at the time the invention was made to perform the same gamma

correction on destination image data in order to provide the "proper" visual appearance of data.

In reference to claims 5 and 18, Yokomizo, Sakuyama et al. and Tretter teach all of the

claim limitations as applied to claims 4 and 17, respectively, however they do not explicitly

teach performing the gamma correction on sRGB destination image. It would have been obvious

to one of ordinary skill in the art at the time the invention was made to perform the gamma

correction on destination image data of type sRGB in order to provide the "proper" visual

appearance for output data ((see column 12, lines 26-28 and Figure 13 of Yokomizo). Further,

sRGB is a known standard color space and the use of this space in place of that of the references

is simply a matter of choice and devices in use.

In reference to claims 6 and 19, Yokomizo, Sakuyama et al. and Tretter teach all of the claim limitations as applied to claims 3 and 16, respectively, Tretter discloses storing RGB images with gamma taken at a 1, linear RGB with respect to a white point (see column 6-7, lines 66-3 and column 7, lines 11-14). Tretter discloses a contrast enhancer which is capable of providing a luminance transform of RGB data (see column 6, lines 19-23).

In reference to claims 7 and 20, Yokomizo, Sakuyama et al. and Tretter teach all of the claim limitations as applied to claims 6 and 19, respectively, however they do not explicitly teach performing the gamma correction on scRGB destination image. It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the gamma correction on destination image data of type scRGB in order to provide the "proper" visual appearance of data for output data ((see column 12, lines 26-28 and Figure 13 of Yokomizo). Further, sRGB is a known standard color space and the use of this space in place of that of the references is simply a matter of choice and devices in use.

In reference to claims 8, 10, 21, 22, 27, and 32, Yokomizo, Sakuyama et al. and Tretter teach all of the claim limitations as applied to claims 6, 16, 20, 26, and 31 respectively, in addition, Sakuyama et al. discloses sending monitor and printer profiles to the color conversion engine in order to apply a color matching process so that color information shown on a monitor matches that on a printer (see column 15, lines 47-54 and #115, 116 of Figure 14). Note that it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate an image-capturing device profile with the color conversion engine in order to create an improved captured image as seen on a monitor or printed paper.

7.   Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokomizo (U.S.

Patent 5,923,824), Sakuyama et al. (U.S. Patent 6,137,595), Tretter (U.S. Patent 6,463,173 B1)

and further in view of Lipton (U.S. Patent 5,835,098).

In reference to claim 9, Yokomizo, Sakuyama et al. and Tretter teach all of the claim

limitations as applied to claim 8 above however, Yokomizo, Sakuyama et al. and Tretter do not

disclose embedding a destination profile of destination color space in converted color image

data. Lipton discloses embedding a color profile defining a certain device into a document (see

column 2, lines 6-10). Neither Yokomizo, Sakuyama et al., Tretter nor Lipton disclose

embedding a color profile in converted image data however, it would have been obvious to one

of ordinary skill in the art at the time the invention was made incoroporate the image-capturing

color conversion techniques of Yokomizo, Sakuyama et al. and Tretter with the embedding of

destination device color profiles in converted color data in order to ensure the correct

visualization of image data even as device components degrade over time (see column 3, lines

14-23 of Lipton).

8.   Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yokomizo (U.S.

Patent 5,923,824), Sakuyama et al. (U.S. Patent 6,137,595) and further in view of Lipton (U.S.

Patent 5,835,098).

In reference to claim 12, Yokomizo and Sakuyama et al. teach all of the claim limitations

as applied to claim 11 above however, Yokomizo and Sakuyama et al. do not disclose

embedding a color profile of source color space in converted color image data. Lipton discloses

embedding a color profile defining a certain device into a document (see column 2, lines 6-10).

Neither Yokomizo, Sakuyama et al., nor Lipton disclose embedding a color profile in converted

image data however, it would have been obvious to one of ordinary skill in the art at the time the invention was made incoroporate the image-capturing color conversion techniques of Yokomizo, Sakuyama et al. and Tretter with the embedding of destination device color profiles in converted color data in order to ensure the correct visualization of image data even as device components degrade over time (see column 3, lines 14-23 of Lipton).

Allowable Subject Matter

9.   Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

In reference to claim 13, the prior art of record (U.S. Patent 5,923,824 Yokomizo , U.S. Patent 6,137,595 Sakuyama et al., U.S. Patent 6,463,173 B1 Tretter and U.S. Patent 5,835,098 Lipton) does not disclose an image acquisition service module operating between the image-processing application and the device driver, delivering requests by the application to the device driver and forwarding color image data from the device driver to the application.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Antonio Caschera whose telephone number is (703) 305-1391. The examiner can normally be reached Monday-Thursday and alternate Fridays between 7:00 AM and 4:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Mancuso, can be reached at (703)-305-3885.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

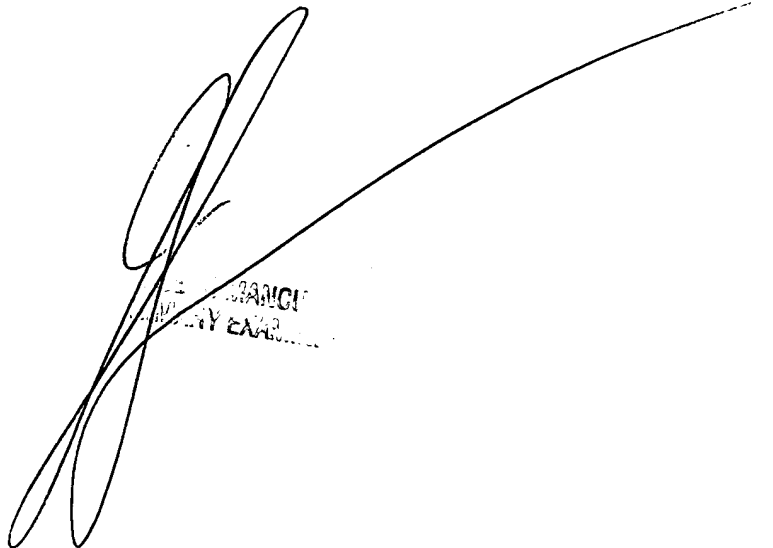Washington 00, D.C. 20231

or faxed to:

(703) 872-9314 (for Technology Center 2600 only)

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,

Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding

should be directed to the Technology Center 2600 Customer Service Office whose telephone

number is (703) 306-0377.

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